User manual

CA824 Digital Wireless Camera

M742 Digital Wireless Monitor

Thank you for purchasing this product. Lorex is committed to providing our customers with a high quality, reliable security solution.

This manual refers to the following models:

LW2770 Series (7" Touch Panel LCD Wireless Video Monitoring System)

For the latest online manual, downloads and product updates, and to learn about our complete line of accessory products, please visit our website at:

www.lorextechnology.com

WARNING

RISK OF ELECTRIC SHOCK
DO NOT OPEN

WARNING: TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT REMOVE COVER. NO USER SERVICEABLE PARTS INSIDE.

REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.

CAUTION: TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF THE PLUG TO THE WIDE SLOT AND FULLY INSERT.

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1 Important Safeguards

In addition to the careful attention devoted to quality standards in the manufacturing process of your product, safety is a major factor in the design of every instrument. However, safety is your responsibility too. This sheet lists important information that will help to ensure your enjoyment and proper use of the product and accessory equipment. Please read them carefully before operating and using your product.

1.1 General Precautions

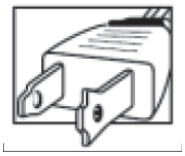
1. All warnings and instructions in this manual should be followed.
2. Remove the plug from the outlet before cleaning. Do not use liquid aerosol detergents. Use a water-dampened cloth for cleaning.
3. Do not use this product in humid or wet places.
4. Keep enough space around the product for ventilation. Slots and openings in the storage cabinet should not be blocked.
5. It is highly recommended to connect the product to a surge protector to protect from damage caused by electrical surges. It is also recommended to connect the product to an uninterruptible power supply (UPS), which has an internal battery that will keep the product running in the event of a power outage.

CAUTION

Maintain electrical safety. Power line operated equipment or accessories connected to this product should bear the UL listing mark or CSA certification mark on the accessory itself and should not be modified so as to defeat the safety features. This will help avoid any potential hazard from electrical shock or fire. If in doubt, contact qualified service personnel.

1.2 Installation

1. **Read and Follow Instructions -** All the safety and operating instructions should be read before the product is operated. Follow all operating instructions.
2. **Retain Instructions -** The safety and operating instructions should be retained for future reference.
3. **Heed Warnings -** Comply with all warnings on the product and in the operating instructions.
4. **Polarization -** Do not defeat the safety purpose of the polarized or grounding-type plug.
   A polarized plug has two blades with one wider than the other.

   A grounding type plug has two blades and a third grounding prong.

   The wide blade or the third prong are provided for your safety.

   If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
5. **Power Sources -** This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supplied to your location, consult your video dealer or local power company. For products intended to operate from battery power, or other sources, refer to the operating instructions.

6. **Overloading -** Do not overload wall outlets or extension cords as this can result in the risk of fire or electric shock. Overloaded AC outlets, extension cords, frayed power cords, damaged or cracked wire insulation, and broken plugs are dangerous. They may result in a shock or fire hazard. Periodically examine the cord, and if its appearance indicates damage or deteriorated insulation, have it replaced by your service technician.
7. **Power-Cord Protection -** Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them. Pay particular attention to cords at plugs, convenience receptacles, and the point where they exit from the product.
8. **Surge Protectors -** It is highly recommended that the product be connected to a surge protector. Doing so will protect the product from damage caused by power surges. Surge protectors should bear the UL listing mark or CSA certification mark.
9. **Uninterruptible Power Supplies (UPS) -** Because this product is designed for continuous, 24/7 operation, it is recommended that you connect the product to an uninterruptible power supply. An uninterruptible power supply has an internal battery that will keep the product running in the event of a power outage. Uninterruptible power supplies should bear the UL listing mark or CSA certification mark.
10. **Ventilation -** Slots and openings in the case are provided for ventilation to ensure reliable operation of the product and to protect it from overheating. These openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should never be placed near or over a radiator or heat register. This product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided and the product manufacturer's instructions have been followed.
11. **Attachments -** Do not use attachments unless recommended by the product manufacturer as they may cause a hazard.
12. **Water and Moisture -** Do not use this product near water — for example, near a bath tub, wash bowl, kitchen sink or laundry tub, in a wet basement, near a swimming pool and the like.
13. **Heat -** The product should be situated away from heat sources such as radiators, heat registers, stoves, or other products (including amplifiers) that produce heat.
14. **Accessories -** Do not place this product on an unstable cart, stand, tripod, or table. The product may fall, causing serious damage to the product. Use this product only with a cart, stand, tripod, bracket, or table recommended by the manufacturer or sold with the product. Any mounting of the product should follow the manufacturer's instructions and use a mounting accessory recommended by the manufacturer.

15. **Camera Extension Cables –** Check the rating of your extension cable(s) to verify compliance with your local authority regulations prior to installation.
16. **Mounting -** The cameras provided with this system should be mounted only as instructed in this guide or the instructions that came with your cameras, using the provided mounting brackets.
17. **Camera Installation -** Cameras are not intended for submersion in water. Not all cameras can be installed outdoors. Check your camera environmental rating to confirm if they can be installed outdoors. When installing cameras outdoors, installation in a sheltered area is required.

1.3 Service

1. **Servicing -** Do not attempt to service this product yourself, as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

2. **Conditions Requiring Service -** Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:
   - When the power supply cord or plug is damaged.
   - If liquid has been spilled or objects have fallen into the product.
   - If the product has been exposed to rain or water.
   - If the product has been dropped or the cabinet has been damaged
   - If the product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions. Improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to its normal operation.
   - When the product exhibits a distinct change in performance. This indicates a need for service.
3. **Replacement Parts -** When replacement parts are required, have the service technician verify that the replacements used have the same safety characteristics as the original parts. Use of replacements specified by the product manufacturer can prevent fire, electric shock, or other hazards.
4. **Safety Check -** Upon completion of any service or repairs to this product, ask the service technician to perform safety checks recommended by the manufacturer to determine that the product is in safe operating condition.

1.4 Use

1. **Cleaning -** Unplug the product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
2. **Product and Cart Combination -** When product is installed on a cart, product and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the product and cart combination to overturn.
3. **Object and Liquid Entry -** Never push objects of any kind into this product through openings as they may touch dangerous voltage points or “short-out” parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.
4. **Lightning -** For added protection of this product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the product due to lightning and power line surges.

2 LW2770 Series Features

- All-in-one rechargeable wireless 7” Touch Panel LCD receiver and recorder [1]
- 3 minute Internet setup with free smartphone / tablet apps (iOS / Android™) [2]
- Record video in 720p HD with audio [3]
- Simple installation. No video cables required [4]
- Up to 90 days of recording [5]
- Multiple recording options: manual, motion, or schedule
- Push notifications sent to your smartphone / tablet when motion is detected
- Two-way audio Intercom
- Triplex operation: view live video, record, and playback simultaneously
- Pre-event motion detection recording
- Dual motion detection technology for more accurate alerts
- Time and date stamped recordings for easy retrieval
- Motorized camera filter provides accurate color reproduction in all lighting conditions
- Indoor / outdoor wireless cameras [6]
- Night time viewing up to 65ft (20m) away in ambient night time lighting conditions and up to 45ft (14m) away in total darkness [7]
- View and record up to 4 cameras at the same time
- Secure wireless signal
- Up to 165ft (50m) indoor / 660ft (200m) outdoor wireless range [8]

NOTE

1. Up to 2.5 hours of portable wireless monitoring. For extended monitoring or remote viewing, ensure the receiver is connected to a local power outlet.
2. Requires a high speed Internet connection and a wired connection to a router (not included). An upload speed of 1Mbps is recommended for optimal video performance. Up to 3 devices may connect to the system at the same time.
3. 720p HD (1280x720) up to 20 fps with 2 cameras, or VGA (640x480) in real-time (30fps) with up to 4 cameras. 720p resolution recordings and live view can only be viewed in HD using smartphones / tablets that support 720p (1280x720) or higher resolutions or on a computer (SD card reader not included). Included monitor resolution is 800x480.
4. Wireless cameras require a wired connection to a power outlet.
5. Motion recording for a single camera based on VGA (640x480) recording resolution with 20 motion events per day and 30 second recording duration per event. Maximum recording time may vary based on the number of cameras that are recording, the amount of motion in the scene, and the size of the memory card used (8GB SD card included; 64GB supported).
6. Weather-resistant. Not intended for direct exposure to rain or snow. For outdoor applications install under shelter protected from the elements.
7. Stated IR Illumination range is based on ideal conditions. Actual range and image clarity depends on installation location, viewing area and light reflection/absorption level of object.
8. Based on line of sight. Actual range will vary depending on obstructions.

3 Getting Started

The system includes the following components:

Indoor / outdoor wireless camera(s)

7” rechargeable Touch Panel LCD receiver / recorder

Power adapters for receiver and camera(s)

8GB SD memory card

Cat5e Ethernet cable

Mounting kit(s)

Quick Start Guide

* Configuration may vary by model

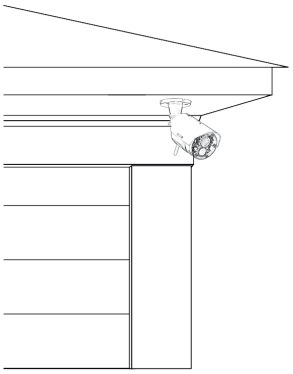
NOTE

Camera configuration, memory card size, and the number of accessories may vary by model. Please refer to your package for specific details. Check your package to confirm that you have received the complete system.

4 Installing the Camera(s)

CAUTION

Cameras are suitable for outdoor installation, but are weather resistant, not weatherproof. **Cameras are not intended for direct exposure to rain or snow.** For outdoor applications, install under shelter protected from the elements, such as beneath roof eaves. The diagram below shows an example of an ideal location for outdoor placement.



4.1 Installation Tips

- Before you install the camera, plan where and how it will be positioned, and where you will route the cable that connects the camera to the power adapter.
- Before starting permanent installation, check the camera image on the receiver when camera is positioned in the same place it will be permanently installed.
- It is recommended to ensure a clear line-of-sight between the camera and receiver and to limit the amount of obstructions, such as walls and tree branches, between the camera and receiver. Walls made of heavy building materials such as brick or concrete will significantly reduce signal range.
- If the signal will have to pass through a wall, placing the receiver or camera next to a window will improve the signal strength.
- Do not install the camera pointing out of a window. The nighttime picture will be unusable due to reflection from the night vision LED's.
- The cameras are pre-paired so they work out of the box. Each camera has a channel number sticker indicating what channel they are paired to. If you have purchased additional cameras, you will need to pair them to the receiver, see 18 *Pairing Additional Cameras*, page 49.

4.2 Mounting Positions

You may mount your cameras on a wall or ceiling. See the images below for recommended configurations of the camera stand and antenna.

Wall

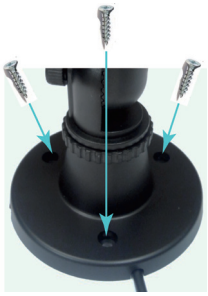
Ceiling

NOTE

For ceiling installation, position the antenna as high as the ceiling allows. See the "Ceiling" mounting position in the figure above.

To install the camera(s):

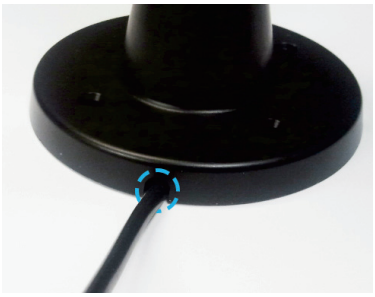
1. Use the included mounting screws to mount the cameras to the mounting surface:



- Mark the positions of the screw holes on the mounting surface.
- Drill holes and insert the drywall plugs (included) as needed.
- Firmly attach the cameras to the mounting surface using the included screws.

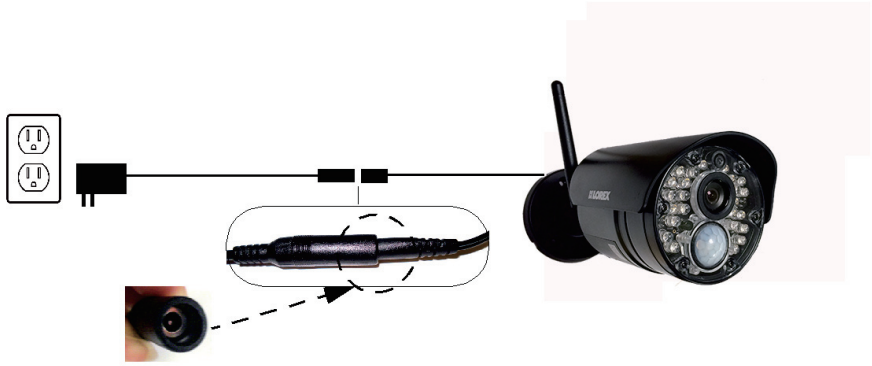
NOTE

- If you run the power cable through the mounting surface, connect power before attaching the camera to the wall.
- If you run the power cable along the mounting surface, the cable must go through the cable notch on the camera base. This will keep the camera base flush to the mounting surface.



2. Loosen the thumbscrews **(1, 2)** and the adjustment ring **(3)** by turning them counter clockwise.

3. Adjust the angle of the cameras until the desired view is set. Tighten the thumbscrews and the adjustment ring to secure each camera's position.
4. Connect the power cable from the cameras to the weatherproof power connector. Plug the power adapter into a power outlet or surge protector.



NOTE

Power cables are only weatherproof when fully inserted at the connection point. Power cables may not be submerged in water.

5. Remove the protective film from the front of the camera. If the film is not removed, it will block the built-in microphone and affect the quality of the picture.

5 Installing the Receiver

Step 1 of 4: Raising the antenna

For best reception, raise the antenna to point directly upward.

Step 2 of 4: Installing the battery

1. Use a Phillips screwdriver (not included) to open the battery compartment on the back panel.

2. Connect the battery cable to the battery terminal in the monitor. When finished, close the battery compartment and replace the screws.

NOTE

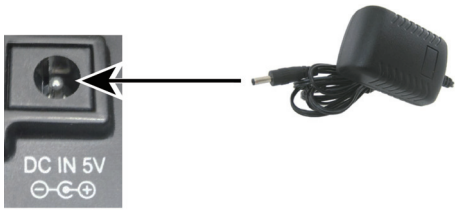
The battery cable only connects one way. Do not force the battery cable.

CAUTION

If you do not plan to use the unit for a prolonged period of time, disconnect the battery or ensure you charge it at least once every 6 months.

Step 3 of 4: Turning on the receiver

1. Connect the cable from the power adapter to the **5V DC** port on the back panel of the receiver. Plug in the power adapter to an outlet or surge protector.



NOTE

Ensure you charge the receiver for at least 10 hours before using for the first time.

2. Press and hold the power button on top of the receiver to power the receiver on.

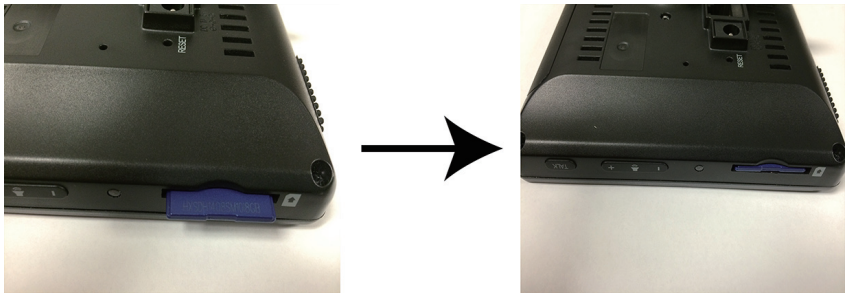
Tips:

- Place the receiver in a location that will have a clear reception to your camera. Try to maintain line-of-sight and minimize the number of obstructions between the camera and receiver.
- Adjust the antennas on the receiver as necessary to provide the clearest reception.

Step 4 of 4: Inserting the SD card

The SD card allows you to store video footage captured by the camera. You should always format the SD card prior to initial recording. For details, see 10.1 *Format Memory Card*, page 22.

- Push the SD card into the SD card slot on the side panel of the receiver until you hear a "click."



NOTE

The receiver is compatible with most major brands of SD cards up to 64 GB. For recording times on SD cards, see 10 *Recording*, page 21.

6 Camera Overview

1. **Microphone:** Built-in microphone.
2. **Lens:** Camera lens.
3. **PIR Sensor:** Passive IR motion sensor.
4. **Speaker:** Speaker for intercom.
5. **Night Vision IR:** Night vision IR LEDs.
6. **Pair:** Pairing button. For more details, see 18 *Pairing Additional Cameras*, page 49.
7. **Antenna:** Removable wireless antenna (SMA).

NOTE

This camera includes an Auto Mechanical IR Cut Filter. When the camera changes between day mode and night vision mode, an audible clicking noise may be heard coming from the camera. This clicking is normal, and indicates that the camera filter is working.